

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of the Claims

Claims 1-11 (Cancelled)

Claim 12 (Currently Amended): A device for precise machining of a material, comprising:

a pulsed laser system having a beam source including ~~an unamplified~~ a cavity-dumped femtosecond oscillator, the beam source being configured to generate radiation having a pulse energy in a range from 100 nJ to 10 μ J and a pulse duration in a range from 100 femtoseconds to 1 picosecond; and

a holding device configured to fix the material in a defined position relative to the beam source such that an unamplified output of the cavity-dumped femtosecond oscillator is directed to the material so as to destroy a cohesion of the material using photodisruption.

Claim 13 (Previously Presented): The device as recited in claim 12, wherein the material is an organic material.

Claim 14 (Previously Presented): The device as recited in claim 12, further comprising a beam apparatus for at least one of a beam formation, a beam guidance, a beam deflection and a beam focusing.

Claim 15 (Previously Presented): The device as recited in claim 14, wherein the beam apparatus is programmable.

Claim 16 (Cancelled): The device as recited in claim 12, wherein the holding device is further configured to position the material in the defined position relative to the beam source.

Claim 17 (Cancelled): The device as recited in claim 12, wherein the cavity-dumped femtosecond oscillator is configured to provide laser pulses having a pulse energy of 100 nJ to 100 μ J.

Claim 18 (Currently Amended): The device as recited in claim ~~14~~12, wherein the pulse energy is 1 μ J.

Claim 19 (Previously Presented): The device as recited in claim 12, wherein the cavity dumped femtosecond oscillator is configured to provide laser pulses with repetition rates from 10 kHz to 10 MHz.

Claim 20 (Previously Presented): The device as recited in claim 14, wherein the beam apparatus is configured to apply a working beam of the beam source to the material in a geometrically predeterminable form and in a temporally predeterminable pattern.

Claim 21 (Previously Presented): The device as recited in claim 20, wherein the beam apparatus includes a beam deflection device and wherein a repetition rate of the working beam is changeable during application of the working beam to the material.

Claim 22 (Currently Amended): A method for applying a laser beam to a material, the method comprising:

providing a laser beam having femtosecond pulses using a beam source including ~~an~~unamplified a cavity-dumped femtosecond oscillator, the pulses having an energy in a range from 100 nJ to 10 μ J;

directing the laser beam without amplification on the material so as to destroy a cohesion of the material in a focus of the laser beam using photodisruption.

Claim 23 (Previously Presented): The method as recited in claim 22, wherein the material is an organic material.

Claim 24 (Previously Presented): The method as recited in claim 22, further comprising guiding the pulsed laser beam onto the material using a deflection apparatus and

modifying a repetition rate of the femtosecond pulses in relation to a spot pattern produced on the material.

Claim 25 (Previously Presented): The method as recited in claim 23, further comprising performing refractive surgery using the laser beam.

Claim 26 (Previously Presented): The device as recited in claim 12, wherein the material includes an eye of a human patient.

Claim 27 (Previously Presented): The device as recited in claim 12, wherein the material includes a cornea of a human patient.

Claim 28 (Currently Amended): The ~~device~~method as recited in claim 22, wherein the material includes an eye of a human patient.

Claim 29 (Currently Amended): The ~~device~~method as recited in claim 22, wherein the material includes a cornea of a human patient.

Claim 30 (New): The device as recited in claim 12, wherein the beam source is configured to generate radiation having a pulse energy in a range from 500 nJ to 5 μ J.

Claim 31 (New): The device as recited in claim 12, wherein the beam source is configured to generate radiation having a pulse duration in a range from 200 femtoseconds to 300 femtoseconds.

Claim 32 (New): The method as recited in claim 22, wherein the pulses have an energy in a range from 500 nJ to 5 μ J.